24 Nov 75

AFFILIATE

The REPEATER JOURNAL

CAROLINAS – VIRGINIA REPEATER ASSN., INC.
ORGANIZED 1971

November 1, 1975 Volume 4 No. 4

SLATE OF OFFICERS 1976 - 77

The following slate of Nominees is being placed before the Board of Directors as the recommended Officers for the two year period beginning in 1976. The nine member Board will be electing officers during the month of November. Additional nominations may be made for any, or all, of the four officer slate by members of the Board prior to the election date. If no further nominations are received, the slate as recommended by the nominating committee will be declared elected without balloting.

PRESIDENT:	Ed Alderman, WA4PEN	Raleigh, NC
VICE PRES:	Calvin Dempsey, WA4UQC	Tarboro, NC
SECRETARY:	Carter Cogle, K4ARO	Petersburg, Va.
TREASURER:	Al Ross, K4CAW	Greensboro, NC

Ed Alderman, WA4PEN, is currently serving as President of the Association, having served a one year term as provided in the new Constitution and By-Laws which was adopted last year. Ed is a Representative from the Raleigh ARS Repeater WR4ACF and is active on 50, 146, and 220 mHz.

Calvin Dempsey, WA4UQC, is currently serving as Director of the Coastal District of the Association. He is a Representative of the Grifton Repeater, sponsored by the ENC Repeater Inc., WR4ABP 16/76. Calvin has served in numerous elective capacities included the ARRL SCM of North Carolina several years ago.

Carter Cogle, K4ARO, is currently serving as Director of the Northern District of the Association. He is a Representative of the Richmond Repeater, WR4ACW, 28/88, and is the prime backer of the new Alberta Repeater which will be on 84/24.

Al Ross, K4CAW, is currently serving as Treasurer of the Association, completing a one year elective term. Al is a Repeater Representative of WR4AOC, 16/76 in Greensboro, and is "the loud voice of NC" on two meter simplex.

The Directors will be considering this slate, plus other candidates during the next few weeks. If you would like to contact your District Director to express your opinions on this slate or suggest other candidates to him, he would sure appreciate it.

All Officer candidates must be Representatives of a Full Member Repeater. They do not have to be a member of the Board of Directors.

WHY IS ASSOCIATE MEMBERSHIP IMPORTANT TO US ?

Associate membership in the CVRA is open to anyone interested in VHF/UHF communications. Dues are $ 2.00 per year. Members receive the quarterly issues of the "Journal", and are eligible to serve on committees within the CVRA. Officers and Directors are elected by the Repeater Representatives from their number. But the backbone of the Association lies in its Associate Membership for two basic reasons:

1. The primary objective of the Association is to provide frequency coordination. In order to provide this service, the VHF amateur in North Carolina, South Carolina, and Virginia, must first recognize that there is an organization in existence that provides the service, and second, he must respect the recommendation of the organization. If a person is a member of the Association and decides to build a repeater, chances are we will not have a problem in working with him on a frequency selection or in resolving interference problems later. But, if a person is not a member, he will usually pick out a frequency himself, make his plans, and then contact the Association (or we will have to contact him). Sometimes this does not result in a problem, but most of the time it does. By belonging to the CVRA a person establishes the type of working relationship and appreciation of potential problem areas that are necessary to insure successful operation of his machine.

2. Any repeater owner/operator is quick to observe the need for education for the users. Most amateurs do not understand how a repeater works, and some don't really care. All they want to do is press the button and talk. Some are not even aware of what frequency they are on - all they know is when they turn the selector to position 5, they are able to talk over the repeater. Some don't even think about the fact that someone had to install the repeater and operate it..... it's almost like the repeater should be there, and I should be able to use it if I want to. Omni antennas on 100' towers of users can create chaos for two or more repeaters - then all of a sudden talk begins to spread of interference between repeater A and repeater B. Most of the time, it is not interference between repeaters at all, but interference caused by inconsiderate and uneducated users. So to make all of our lives more enjoyable we need to boost our ranks with Associate members and provide the education necessary to overcome this problem.

In every issue of the "Journal" we attempt to include an article that will be of interest to the newcomer. If you have something to contribute to this education program, please send it to the Editor.

If you are not a member of the CVRA, how about joining us..... we need you, and you may need us too.....

Lindsay Cleveland, W4IZI, Associate Membership Chairman, would like to remind everyone that when your membership comes up for renewal, you will receive a reminder form inside your copy of the Newsletter..... this will be an insert to the issue during the quarter before your membership expires. You will receive a "late" notice in the next quarterly issue of the Newsletter.... and then after that you will be removed from the roll. When you receive your initial notice, please take the time then to send in another year's dues. A lot of members are joining up for two years, so maybe you will want to consider that next time.

Also.... if your address should change please let us know so you will continue to receive your Newsletter.

SPECIAL PROJECT FROM THE CAPE FEAR AMATEUR RADIO SOCIETY.... FAYETTEVILLE, NC

During the Labor Day weekend, the Cape Fear ARS offerred their services to the NC State Highway Patrol..... and the weekend was a real success.

The CFARS had 26 members involved in Operation "78" with continuous coverage of major highways in Cumberland County from 0600 Friday, Aug 29, through 0000 midnight Monday, Sep 1, 1975, an elapsed time of 78 hours. The mobile units looked for stranded motorists, accidents and traffic bottlenecks, thus relieving patrolmen for apprehending traffic violators. A 2 meter station was set up at the Highway Patrol Hq so as to maintain contact with the Patrol.

Over 330 manhours were devoted to patrolling by the CFARS and over 5000 miles were covered. 70 incidents/observations were recorded. The operation was not intended as a "one-shot" operation, but as a pilot model for future assistance to law enforcement agencies throughout the state.

ANOTHER REASON WHY YOUR LICENSE RENEWAL MAY TAKE SO LONG

One cause of delays in the processing of amateur license applications at the FCC's Gettysburg office turns out to be that routine applications for the modification, renewal, or upgrading of licenses with control station (CTL) or auxiliary station (AUX) privileges also involve the manual updating of the records on the associated remotely controlled station. This means that such applications must include the call sign and the name of the licensee of the associated station (usually a repeater) so the records can be located, even though there is no place on the Form 610 to enter this information; in fact, it has only been in the past week (Sep 11) that we (ARRL) learned from the Commission that this information was necessary.

For example, if W5XYZ is a control station for WR4AAZ, when he renews, modifies, or upgrades his license he should attach a statement similar to this: "W5XYZ is a control station for WR4AAZ, licensed to John Q. Ham as Trustee for the Central Arkansas AREC." If this information is not included, the Commission probably will have to write and ask for it, resulting in delays and additional paperwork. (TNX ARRL DIRECTORS' LETTER)

Editor's Note: Most of the repeaters in our area are telephone controlled so there are not very many control stations as such. Wire controlled repeaters have "control points" noted on their licenses with no call letters of who actually resides at that point, if anybody. But the above reminder does apply to those who are "Control Stations" or those who may be the holder of an "Auxiliary Link" station.

"THE REPEATER JOURNAL" ..... is published four times a year for members of the Carolinas-Virginia Repeater Association, Inc.

Permission is granted for quoting from "THE JOURNAL" provided credit line is given. A copy to the Editor would be appreciated. This newsletter is swapped to other Repeater Councils for copies of their newsletters.

"THE REPEATER JOURNAL" has a circulation of 1000 copies, and is entered as Second Class Mail at the Post Office in Burlington, NC 27215.

Deadline for all copy and advertisements is the 20th of January, April, July and October. The Editor reserves the right to reject, edit, or delete portions of copy submitted. Advertising rates are available from the Editor. Direct all correspondence to:

Bill Parris, K4GHR, 6210 Gothic Ct., Charlotte, NC 28210

REPORT FROM THE CVRA BOARD OF DIRECTORS MEETING HELD AUGUST 30.

(This is a report as prepared by the "Journal" Editor, K4GHR. The official minutes of the meeting have not been submitted to the "Journal" as yet)

The Board meeting was held at Cedar Park on the Saturday afternoon prior to the Shelby Hamfest. President Ed Alderman, WA4PEN, welcomed all who were present and received reports from the Officers and Directors.

The following Officer/Directors were present:

President	WA4PEN	Newsletter Editor	K4GHR
Vice President	WB4DBB	Technical Editor	WB4EXW
Secretary	W4WDI	Director Central District	K4WHQ
Treasurer	K4CAW	Director Coastal District	WA4UQC
Associte Membership	W4IZI	Director Eastern District	WA4WTX
Repeater Membership	WB4LWX	Director Northern District	K4ARO
Freq Coord Com Chairmn	WA4WTX		

The following Officers/Directors were absent:

Director Bay District	WA4MMP	Director Southern District	K4FR
Director Mountain Dist	WB4MOV	Director Western District	WB4ROI
Director Piedmont Dist	W4BUZ		

OLD BUSINESS:

- The Frequency Coordination and Control Procedures as written in the May 1975 issue of "The Repeater Journal" were approved as the formal guideline that the CVRA will follow in the future.

- The ARRL Band Plans for 450 mHz and 50 mHz were formally accepted as the standard plan for the CVRA.

- The Technical Committee was appointed by the President. K4IAR was appointed as Chairman, with the other members being W4DGE, WB4JCI, WB4EXW, WB4SNA, and K4PRJ.

- WA4PEN then reviewed the procedures for the election of officers which includes the recommendation by a nominating committee. The Nominating Committee will consist of K4ARO, WA4WTX, and WA4UQC. Election of Officers will be by the Board of Directors.

- WA4PEN appointed K4GHR to obtain a design and quote on an emblem/decal for the CVRA.

NEW BUSINESS:

- Discussion was held on the use of "Tertiary Channels" within the CVRA area. These are the channels which lay between the current channels. The following guidelines were agreed upon:
  a. Use these as low-in/high out in the 146 range, and high-in/low-out in the 147 range. (just as are the other channels)
  b. Maintain at least 75 mile separation between a tertiary channel and any adjacent channel.
  c. Use as an absolute last resort

- The President urged Directors to hold District Meetings at future Hamfests. It was noted that this should be done, but never has been.

REPORT FROM THE CVRA BOARD MEETING continued

- Critism was directed to the contents of "The Repeater Journal" as being the "opinions" of a selected few and not that of the CVRA. The Board directed the Editor to note in the "Journal" when articles were opinions and when they represented an official position by the CVRA.

- Critism was directed to the relations that appear to exist between the Directors of some of the districts and the Repeater Trustees within the districts. More open communications between the Directors/Vice Directors and the Repeater Reps were encouraged.

- The Board went on record as continuing to back the Mt Pisgah Repeater in its effort to retain 16/76 as its operating channel.

The meeting adjourned at 1800.

The above summary was prepared by the Editor and does not intend to replace the official minutes of the meeting which will be published when submitted by the Secretary.

REPORT FROM THE COASTAL DISTRICT

Director: WA4UQC, Calvin Dempsey 1604 West Canal St. Tarboro, NC 27886
Vice Dir: W4NTQ, Eddie Sellers 1848 Skycoe Dr. Whiteville, NC 28472

(JACKSONVILLE, NC) .... WR4AJG, 40/00, is on the air with a new antenna system which consists of eight stacked Phelps-Dodge dipoles at 250', fed by 7/8" hard-line and feeding through a Phelps-Dodge duplexer. Bert, WA4TLI, reports mobile coverage averaging 45 miles. Equipment is GE Progress Line. Lightning got the antennas on August 26, but they are back on the air now. (WA4TLI, W4NTQ)

(WILMINGTON, NC) ..... WR4AHL, 22/82, has good mobile coverage again after installing two Phelps-Dodge model 342-509 antennas on their tower. The Wilmington VHF Association sponsors this machine which is located 18 miles SW of Wilmington on the WWAY-TV tower. (W4NTQ)

(GRIFTON, NC) .... WR4ABP, 16/76, now is sporting a new Phelps-Dodge Super Stationmaster receiving antenna, installed September 6. There is still an occassional burst of intermod from the 2nd harmonic of an adjacent 26mHz transmitter beating against another signal. Search continues in effort to solve this problem. (WB4LWX)

(ROANOKE RAPIDS, NC) ..... WA4DTS, Bubber Croom, has inquired about a possible repeater for the Roanoke Rapids area. Anyone in that area that can offer WA4DTS some assistance would be appreciated. (WB4LWX, WA4UQC)

(GRIFTON, NC) .... WR4ABP, 16/76, sponsored by the ENC Repeater Inc now has 82 members. A complete backup repeater has been constructed by this group including a /4 Identifier just in case. (WB4LWX)

(SEVEN SPRINGS, NC) .... WR4AEF, 25/85, plans to split site and increase power. Don, WA4KLR, is considering the installation of an autopatch to serve both the Kinston and Goldsboro exchanges, if there is sufficient support. (WB4LWX)

(BEULAVILLE, NC) ... WR4ADS, 34/94, is trying to get permission to locate the transmitting antenna on a 250' microwave tower to increase coverage, This machine continues under local control and is on whenever WA4UMH is at home.

(AURORA, NC) .... WR4ABQ, 34/94, continues to offer good coverage around this area. Base stations from New Bern easily access this machine. (WB4LWX)

RECENT FCC CHANGES

John Johnston, K3BNS, was named recently as the Chief of the Amateur and Citizens Division, succeeding Prose Walker, W4BW. John has served in a number of capacities with the Commission, his latest post being that of Assistant Chief, Bureau of Spectrum Management. Before that, he was Chief of the Rules and Legal Branch of the Amateur and Citizens Division. He is the author of the infamous "Repeater Rules", Docket 18803, and the current "Reorganization of the Amateur Service", Docket 20282. While we may not agree with everything that he has written or done, no one can question his readiness to try a new idea or work with us. Johnny is active in HF as well as VHF. In addition to his low band station, he has in his car, a VHF transceiver and carries an HT-220. He seems to be very interested in working with the various amateur organizations - especially the ARRL. Johnny was one of the featured speakers at the Roanoke Division League Officials Meeting last Spring in Richmond. He reviewed Docket 20282 at that time and answered many questions from the floor. When you look at what he has done, and when you get a chance to meet him, I think you will have to agree with most that Johnny will probably be a success in his new assignment.

Earlier, Joe Johnson, W3GGO, was named as Chief of the Rules and Legal Branch of the Amateur and Citizens Division. Joe is a native of Illinois, a graduate of the University of Illinois in 1970 with a BSEE degree, and currently holds an Extra Class Amateur License. He has been working in the Commission's Rules Division prior to his new assignment. Joe says his favorite amateur activity is chasing DX and high speed CW rag chewing - he has a 30 wpm code certificate from ARRL.

CVRA TECHNICAL COMMITTEE

At the Board Meeting held at the Shelby Hamfest, President Ed Alderman, WA4PEN, appointed the first official CVRA Technical Committee.

Joe Lucas, K4IAR, was appointed as Chairman. Other members of the committee include Dan McMillin, W4DGE and Carol Keller, WB4JCI, both from Greensboro, Watson Gabriel, WB4EXW, Kernersville, NC, Tommy Talbert, WB4SNA, Advance, NC, and Jim Evans, K4PRJ, Kinston, NC.

The committee will serve to answer questions from member repeaters on control circuitry, antenna installations, intermod problems, or anything else that may arise. They will accumulate ideas from the entire membership on how problems have been approached and solved at other repeater installations so they can be shared with others.

If you have solved a difficult problem at your repeater, please relay that solution on to the committee, so they can begin building their files.

One of the first projects that the committee has undertaken is to design and prototype a simple, low cost, squelch board that can be attached to any VHF rig and allow the user to monitor a repeater frequency without listening to the normal traffic activity, but be alerted when there was a bulletin or special announcement to which he should direct his attention. The circuit would be activated by a tone, or combinations of tones, and thereby allow the rig to remain silent until the tone(s) are activated. The circuit would be made available to all members via the "Journal", and maybe be sold in a kit form by the CVRA. If you have any ideas on such a circuit, you may want to contact Joe.

The committe cannot function effectively without the membership helping to supply "solution" information to them. They will not have time to sit around and propose solutions to problems from scratch..... so let's give them our support.

You may contact Joe Lucas, K4IAR, Chairman of the CVRA Technical Committee, at 2303 Killarny Drive, Greensboro, NC 27406.

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REPORT FROM THE SOUTHERN DISTRICT

Director: K4FR, Hugh Minton 44 Longwood Dr. Aiken, SC 29801
Vice Dir: K4OKD, Cliff Semken 436 Wallace Dr. Charleston, SC 29412

(NORTH AUGUSTA, SC) .... WR4ABB, 13/73, is operated by the North Augusta, SC Radio Club. Dick Schoenfelder, K4FKJ, is the new custodian replacing Charlie Wright, W4PED, who conceived and guided the repeater through construction, licensing, start-up, and two years of operation. This is a 24 hour, carrier operated, repeater using GE Progress Line equipment. The antenna is a Cush-Craft colinear located on a water tower. The total system has worked well for the last year with only a few hours outage. The new cooling fan system and voltage transient protection have helped attain this reliability. A new tape deck monitor is in operation. Coverage is dependable over a 30 mile radius in Richmond and Columbia Counties in Georgia, and McCormick, Aiken, and parts of Barnwell Counties in South Carolina. (K4FR)

(AUGUSTA, GA) ..... WR4ALS, 93/33, is operated by the Richmond County Radio Relay Association and its 60 members. Henry Townes, W4ALK, is custodian. This is a 24 hour, carrier operated, open repeater using GE MASTR equipment and a DB Products duplexer. Power output is 80 watts feeding a 6dB antenna about 200' HAAT in the area south of Augusta. Coverage is about 50 miles. An autopatch should be operating in November. This repeater has an application form for membership in the CVRA and plans to apply for membership in the near future. (K4FR)

(CHARLESTON, SC) ... The equipment for the proposed 16/76 repeater, to be located on the USS Yorktown, is on order. Plans are to have the machine in service around the first of the year (1976). The 450mHz repeater also under construction at this time will probably also be located on the Yorktown, rather than on the Holiday Inn as originally planned. This machine will be on 449.10/444.10. (WB4GPS)

(BEAUFORT, SC) ..... The Coastal Amateur Radio Association will begin operations using WR4AKO/4 as a temporary call in the very near future. The 31/91 machine is ready to go except for the Identifier. Tests have been conducted from the site using 52 simplex with very good results. Mobile coverage is expected to be solid in the area between Charleston, Savannah, Orangeburg and Manning. The GE Progress Line repeater will feed 60 watts through a Phelps-Dodge duplexer to a Decibel Products DB-224-E, four dipole antenna located at 438' on the side of WJWJ ETV tower. The TV tower is located 22 miles north of Beaufort near the communities of Green Pond and White Hall, which are between US 17 and I-95, just about half way between Charleston and Savannah. Welcome to the CVRA fellows. (WB4PVL, WB4GPS)

(MYRTLE BEACH, SC)..... Rumors of a repeater in this area??? Man that sho wud be nice for us North Carolinians who like to relax with our "walkie-talkies" on the beach.....

(SUMTER, SC) ..... WR4ACD/4, 10/70, is giving good coverage along I-95 between Florence and the Junction of I-26 and I-95. This is a temporary call. (WB4GPS)

(FLORENCE, SC) ..... WR4AGM, 37/97, have made several modifications in their equipment during the past several months. Power output has been increased to 30 watts and excellent mobile coverage is being reported. (W4NTQ)

(ORANGEBURG, SC) .... The Orangeburg ARC is still in the initial planning phase for a repeater in the Orangeburg area. A crucial planning meeting is scheduled for the first Tuesday in November to begin work on the licensing paperwork and set up a financing strategy. Initial plans call for the machine to be located on a hotel in the downtown area. (K4IPG)

REPEATER MEMBERSHIP REPORT
Bill Page WB4LWX

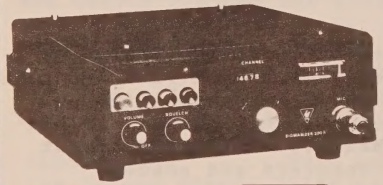
The CVRA Repeater Membership now stands at 65 Repeaters - 39 in North Carolina, 12 in South Carolina, and 14 in Virginia. There are 16 active repeaters that are not members of CVRA, 10 are in Virginia which is also served in the Northern area by The Middle Atlantic FM and Repeater Council. This high percentage of membership speaks very highly of the Association and the repeater owners who recognize the need to work together in this frequency coodination effort.

Repeater Membership is available to any group or individual that operates a licensed amateur VHF/UHF repeater which provides consistent service to an area within the states of North Carolina, South Carolina, or Virginia. The repeater is represented in the Association by two licensed amateurs -- they have one vote between them. These Representatives are eligible to run for the posts of Director and Vice Director in their respective districts, and for all of the officer posts such as President, Vice President, Secretary and Treasurer.

All repeaters must renew their membership each year on January 1. Dues are $6.00 per year. 1976 renewal applications will be mailed out in December to both representatives of each repeater. Please complete one of the forms and return it with your $6.00 for '76 membership. The data asked for on the form is needed for use in the "Annual CVRA Directory and Data Book" which is published on May 1.

The Association is divided into nine districts - each having a Director and Vice Director elected for two year terms by the Repeater Representatives in their respective districts. The terms of all present Directors and Vice Directors run through 1976. A list of all repeaters by district is included in this issue.

If you know of a repeater that is not a member of CVRA, please discuss the possibility of having him join up with us.



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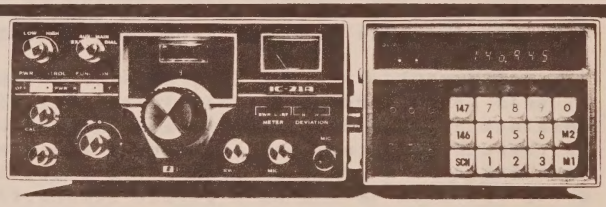

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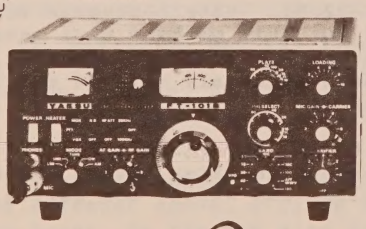

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REPORT FROM THE PIEDMONT DISTRICT

Director: W4BUZ, Don Harris Rt 11, Box 160 Greensboro, NC 27410
Vice Dir: W4IRE, John Huffman 2400 Hoyt St. Winston-Salem, NC 27103

Activity from the Piedmont District continues to grow both from a standpoint of new repeaters as well as new repeater users appearing almost daily. Automatic control seems to be the next thing to try on the part of some repeater owners in this district. Reports on systems employed including shutdown methods in case of tape recording failures which you develope could be helpful to others. Repeater owners are asked to please send details on success of automatic operation to the District Directors so that it may be passed on to interested potential users..... tnx W4BUZ

(SALISBURY, NC) ..... WR4AAA/WR4AJD, 13/73, this wide area coverage machine now has emergency power capability ready, should regular mains fail. WB4SNA reports that the autopatch should be ready to re-install on the repeater around mid-November. The Central North Carolina Traffic Net continues to operate nightly through this machine. The CNCTN meets at 2200 hours local time. Everyone is invited to check in. (W4BUZ)

(LEXINGTON, NC) ..... WR4ABX, 31/91, is now running full legal power to provide best service possible. Automatic control will be implemented on this machine in November, tape type. (W4BUZ)

(WINSTON-SALEM, NC) ..... WR4ACA, 04/64. The ownership of this machine is seeking tape equipment suitable for automatic control use. Please contact W4KGR, Bob RReagan, or anyone in the Winston group if you know the whereabouts of something useful in this realm..... (W4BUZ)

(REIDSVILLE, NC) .....WR4ADE, 25/85. This repeater is now employing taping method automatic control on a part time basis during night time hours. A 24 hour service is being provided. (W4BUZ)

(MT. AIRY, NC) ..... WR4ACJ, 37/97. A 6 meter repeater is still be planned by this group, however no date for completion has been set. Much work has been done at the Piedmont group's site in providing club operating capability on 10 through 80 meters and separate 6 and 2 meter antenna installations. North Carolina can be proud of this model installation. Members from the Piedmont group operated WM4ALF as a public demonstration of repeaters and amateur radio during the Mt. Airy Autumn Leaves Festival which was held the weekend of October 11 & 12. (W4BUZ)

(ROARING GAP, NC) ..... WR4AGS, 22/82. WB4PZA reports that tape logging type of automatic control is planned for this machine when equipment can be obtained and implemented. If you know of any surplus equipment, please let the fellows know. This group has done extremely well in serving a wide area of the Western Piedmont area. (W4BUZ)

(GREENSBORO, NC) .... WR4AOC, 16/76. The license finally came for this machine which is sponsored by the Greensboro Repeater Club. Owners include W4AGD, A. W. Greeson, W4FRH, Bob Franklin, and W4BUZ, Don Harris. Antenna height above MSL is 1330'. (W4BUZ)

(GREENSBORO, NC) ... WR4ANP, 72/12. The Greensboro/Guilford County Civil Prepardness Repeater Association, K4MOB Trustee, plans power increase to improve coverage of this split site operation. Net activity, code practice, and transmitter hunts are regular activities. A telephone patch to the police department will soon be in service. (W4BUZ)

REPORT FROM THE PIEDMONT DISTRICT..... continued

(GREENSBORO, NC) ..... WR4ANL, 81/21. This machine will be operated under automatic control employing continuous tone access in accordance with the new ruling for non-tape type control. Experimentation with digital logic fail-safe control is planned. The machine is owned by Don Harris, W4BUZ. Operation will be primarily experimental in the beginning pursuant to circuit development using inexpensive IC devices. (W4BUZ)

(HIGH POINT, NC) .... WR4ADT, 40/00. K4AZA reports that the repeater and autopatch system are back up after a short down period caused by lightning. A full schedule service is being provided from this pioneer facility. (W4BUZ)

(HIGH POINT, NC) .... WR4AFV, 19/79. This machine continues to provide a full time service. The TRIAD Club continues to grow and meets the second Tuesday each month at 1930 at 1200 Chestnut St. in High Point. (W4BUZ)

(HICKORY, NC) .... Brant Hass, WA4MDW, still testing a repeater on 25/85 to be located on Barrett's Mountain, 20 miles NE of Hickory, in Alexander County. License application is on file with the FCC. (W4BUZ, K4DJ)

(SAURATOWN MTN, NC) ..... Beacham Leonard, W4RXG, has filed for a repeater license from this ETV location. A machine on 448.00/443.00 mHz is being planned. (W4BUZ)

(MORGANTON, NC) ..... The Morganton ARC will soon have their 75/15 machine on the air from atop Hi-Peak Mountain, south of Morganton, with an HAAT of 350'. Trustee of the repeater license will be James Reavis, WA4HWP. Equipment will be a VHF Engineering repeater built from a kit by the four members who include WA4HWP, WB4UDS, K4AI, and James Epley, Jr. The duplexer is a homebrew 6 cavity afair also built by the members. While awaiting the arrival of the license, the machine is being tested from the QTH of WB4UDS. The club is planning code and theory classes for those in the area who wish to become hams. (WB4UDS)

(GREENSBORO, NC) ..... The LIARS, Ladies In Amateur Radio Society, are presently holding classes for women only for the Novice, Technician, and General class licenses. They meet at the Greensboro Radio Club, W4GG, every Wednesday night from 7 to 9 PM. (WB4EXW)

(LENOIR, NC) ..... Work continues on the machine to be operated on 93/33 from the former WR4ACM 25/85 site on Hibriten Mtn. This repeater is the effort of Bud Ayers, WB4QWC and Gary Hartley, K4HTV. No definite start-up date has been established for this machine. (WB4QWC)

FUTURE HAMFESTS..... Metrolina Hamfest sponsored by the Mecklenburg ARS, Charlotte, NC, March 28, 1976..... Bicentennial Durhamfest sponsored by the Durham FM Association, Durham, NC, May 15-16, 1976..... Virginia Beach Hamfest sponsored by the Tidewater Radio Convention Inc, Virginia Beach, Va, July 24-25, 1976.

73 MAGAZINE TO HAVE A COMBINED ISSUE.... The next issue of 73 magazine, which would normally be the November issue, will be a combined November/December issue. Their January issue, in the new size format, will be out at the time that other publishers are issuing their December issues. It is unclear as to whether 73 subscribers get 11 issues for the price of 12 or what. (ARRL)

FCC POST OFFICE BOX NUMBERS..... Amateur Radio License applications can be speeded up by using the new box number of P. O. Box 1020, Gettysburg, Pa. 17325. Aircraft licenses go to Box 1030, Ship to Box 1040, and Restricted Radiotelegraph to Box 1050. (ECHOES)

NET REGISTER (LOCAL TIMES SHOWN)

TWO METERS

FAYETTEVILLE, NC	WR4ADK	31/91	CAPE FEAR ARS NET	DAILY	1930
LEXINGTON, VA	WR4ABU	01/61	CENTRAL VIRGINIA TRAFFIC NET	DAILY	2000
SALISBURY, NC	WR4AAA	13/73	CENTRAL NORTH CAROLINA TFC NET	DAILY	2200
RALEIGH, NC	WR4ACF	04/64	RARS NET	MTTHF	2000
RICHMOND, VA	WR4ACW	28/88	AMATEUR TRAFFIC & TROUBLE NET	MTWTH	2030
BURLINGTON, NC	WR4AIF	07/67	ALAMANCE AREC NET	MWF	2100
CATAWBA CO, NC	SIMPLEX	146.82	CATAWBA COUNTY RACES NET	MON	1900
NORFOLK, VA	SIMPLEX	145.80	HAMPTON ROADS EMERGENCY NET<AM>	MON	2000
CHARLOTTE, NC	WR4AEU	34/94	MECKLENBURG ARS NET	MON	2030
LYNCHBURG, VA	WR4ADY	34/94	LYNCHBURG TWO METER NET	TUE	1900
ASHEVILLE, NC	WR4AKR	16/76	WESTERN NORTH CAROLINA TFC NET	TUE	2030
NORFOLK, VA	SIMPLEX	145.025	TIDEWATER SSB NET(2M) <SSB>	TUE	2100
HAMPTON, VA	WR4AFT	34/94	HAMPTON ROADS EMERGENCY NET	WED	2000
LENOIR, NC	WR4ACM	25/85	WESTERN PIEDMONT EMERGENCY NET	WED	2100
WINSTON-SALEM, NC	WR4ACA	04/64	FORSYTH CO AREC/RACES NET	WED	2100
GRIFTON, NC	WR4ABP	16/76	ENC EMERGENCY NET	THU	2000
GREENSBORO, NC	WR4ANP	72/12	GUILFORD COUNTY EMERGENCY NET	THU	2100

SIX METERS

RICHMOND, VA	50.250	CENTRAL VIRGINIA NET <AM>	DAILY	1900
LEXINGTON, NC	50.120	NORTH CAROLINA 6 MTR ASSN (SSB)	SUN	0900
ATLANTA, GA	50.110	INTERSTATE NET (SSB)	SUN	2100
CHARLOTTE, NC	50.400	CHARLOTTE HORNET NET (AM)	SUN	2100
NORFOLK, VA	50.150	TIDEWATER SSB NET(SSB)	TUE	2000
CHARLOTTE, NC	50.110	DIXIE NET (SSB)	WED	2100
GLENDALE SPRINGS, NC	50.120	NORTH CAROLINA SIX MTR NET (SSB)	THU	2100

LATE NEWS ITEMS ..... Thanks to "HR Report", published by "Ham Radio"

LOCAL AND STATE POLICE are joining the crackdown on CB lawlessness. Indianapolis police stated in an article in the Indianapolis Star sent in by K9EQT they will be stopping autos with two-way radios and qustioning drivers to see if they're properly licensed. Those with CB unable to produce a CB license will have names and addresses sent to FCC to check to see if they do hold a license. At the same time CB radios will be checked for missing or altered serials... drivers with suspect radios will be subject to arrest and their radios to confiscation.

ONE BIG REASON for the Indianapolis crackdown is the number of "hot" CB rigs believed to be on the local market..... over 3000 have been stolen there during the past 3 months. Estimates are that 80-90% of the CB sets in the city are "hot". Likewise Washington, DC reports that an average of 60-70 CB radios are stolen there each day. And also recently, a tractor trailer rig with over 3000 stolen CB sets was nailed in a southeastern state.

AMATEURS WITH MOBILES should be aware of these activities and plan to leave a copy of their license in their cars in case a family member should be stopped. Those with CB mobiles should also note the rules requiring a tag with call and name of the licensee that's required to be attached to each CB radio. Amateurs with converted commercial gear better check for missing nameplates... many states have laws making it a crime to possess <u>any</u> item from which the serial number has been removed, so that 20 year old boat anchor in the trunk could cause you a lot of explaining.

DISTRIBUTION OF TWO METER REPEATERS

	NORTH CAROLINA	SOUTH CAROLINA	VIRGINIA
01/61		GREENVILLE	LEXINGTON
04/64	ASHEVILLE, RALEIGH WINSTON-SALEM		
07/67	BURLINGTON, FOREST CITY LAURINBURG		BARREN SPRINGS
10/70	GREENVILLE(TN)	LANCASTER, SUMTER	DANVILLE
13/73	SALISBURY	NO. AUGUSTA	HAMPTON, ROANOKE
16/76	GRIFTON, ASHEVILLE GREENSBORO, KINGSPORT(TN)	CHARLESTON	LYNCHBURG
19/79	HIGH PT., JOHNSON CTY(TN)		
22/82	ASHEVLE,CHARLOTTE,DURHAM WILMINGTON, ROARING GAP	GREENVILLE	CHESAPEAKE, FAIRFAX WINCHESTER
25/85	HICKORY, REIDSVILLE SEVEN SPRINGS		PORTSMOUTH
28/88	RALEIGH, SHELBY BRISTOL(TN)	COLUMBIA, SAVANNAH(GA)	CHARLOTTESVILLE, RICHMOND, ROANOKE
31/91	FAYETTEVILLE, LEXINGTON MURFREESBORO	BEAUFORT	TYSON'S CORNER
34/94	AURORA, CHARLOTTE, DURHAM BEULAVILLE, MANTEO	CHARLESTON, COLUMBIA GREENVILLE, AUGUSTA(GA)	HAMPTON, LYNCHBURG, ROANOKE, RICHMOND
37/97	MT. AIRY	ANDERSON, FLORENCE	ROANOKE(38/98), BULL RUN
40/00	HIGH POINT, JACKSONVILLE	PICKENS	STAUNTON, VIRGINIA BEACH SUFFOLK
43/03	SMITHFIELD	ROCK HILL	RICHMOND
46/06	CHARLOTTE, ELIZABETH CITY		
69/09	GREENVILLE		GALAX
72/12	GREENSBORO		
75/15	DURHAM, MORGANTON		ALEXANDRIA
78/18	BURLINGTON, CHARLOTTE		
81/21	LAKE TOXAWAY, GREENSBORO		
84/24	FRANKLIN		WOODBRIDGE, ALBERTA
87/27	WINSTON-SALEM		
90/30	CHARLOTTE (24/90)		
93/33	LENOIR	AUGUSTA(GA)	NEW MARKET
96/36		COLUMBIA	
99/39			

North Carolina

ASHEVILLE	WR4ALC	146.04	146.64	C
ASHEVILLE	WR4AKR	146.16	146.76	C
ASHEVILLE	WR4AGF	146.22	146.82	C
AURORA	WR4ABQ	146.34	146.94	C
BEULAVILLE	WR4ADS	146.34	146.94	C
BURLINGTON	WR4AIF	146.07	146.67	C
BURLINGTON	WR4AKY	147.78	147.18	P
CHARLOTTE	WR4ABT	146.22	146.82	C O
CHARLOTTE	WR4AEU	146.34	146.94	CA
CHARLOTTE	WR4ALO	146.46	147.06	C
CHARLOTTE	WR4ABK	147.78	147.18	C
CHARLOTTE	WR4AJX	147.24	147.90	
DURHAM	WR4AJY	146.34	146.94	AT
DURHAM	WR4AJV	147.75	147.15	C
DURHAM	WR4AGC	146.22	146.82	CA
ELIZABETH CITY	WR4ADN	146.46	147.06	CAT
FAYETTEVILLE	WR4ANN	146.31	146.91	C
FOREST CITY	WR4AHA	146.07	146.67	C
FRANKLIN	WR4ALD	147.84	147.24	C U
GREENSBORO	WR4AOC	146.16	146.76	C
GREENSBORO	WR4ANP	147.72	147.12	C
GREENSBORO	WR4	147.81	147.21	U
GREENVILLE	WR4AMB	147.69	147.09	CA
GRIFTON	WR4ABP	146.16	146.76	C
HICKORY	WR4	146.25	146.85	U
HIGH POINT	WR4AFV	146.19	146.79	C
HIGH POINT	WR4ADT	146.40	147.00	A
JACKSONVILLE	WR4AJG	146.40	147.00	C U
LAKE TOXAWAY	WR4AGH	147.81	147.21	C P
LAURINBURG	WR4AIB	146.07	146.67	C
LENOIR	WR4ACM	147.93	147.33	C U
LEXINGTON	WR4ABX	146.31	146.91	CA
MANTEO	WR4AKB	146.34	146.94	C
MORGANTON	WR4	147.75	147.15	U
MT. AIRY	WR4ACJ	146.37	146.97	C
MURFREESBORO	WR4AFB	146.31	146.91	CA
RALEIGH	WR4ACF	146.04	146.64	C
RALEIGH	WR4AOE	146.28	146.88	CA
REIDSVILLE	WR4ADE	146.25	146.85	C
ROARING GAP	WR4AGS	146.22	146.82	C
SALISBURY	WR4AAA	146.13	146.73	CA
SEVEN SPRINGS	WR4AEF	146.25	146.85	C
SHELBY	WR4ABF	146.28	146.88	C
SMITHFIELD	WR4ALY	146.43	147.03	C U
WILMINGTON	WR4AHL	146.22	146.82	C
WINSTON-SALEM	WR4ACA	146.04	146.64	CA
WINSTON-SALEM	WR4	147.87	147.27	P

ASHEVILLE	WR4ALC	52.01	53.99	C U
DURHAM	WR4	52.15	53.15	U
HICKORY	WR4	52.78	52.525	P
SALISB/MOCKSVLE	WR4	52.76	52.525	U

ASHEVILLE	WR4AKR	222.34	223.94	C
DURHAM	WR4AGC	222.34	223.94	C
DURHAM	WR4	223.22	224.82	U
RALEI H	WR4	223.34	224.94	U

ASHEVILLE	WR4AKR	449.90	444.90	C U
CHARLOTTE	WR4AEI	450 PRIVATE		
DURHAM	WR4AGC	449.10	444.10	CAT
HIGH POINT	WR4ADT	447.90	442.90	
WINSTON-SALEM	WR4	448.00	443.00	U

South Carolina

ANDERSON		WR4AIO	146.37	146.97	C
BEAUFORT	*	WR4AKO	146.31	146.91	C U
CHARLESTON		WR4	146.16	146.76	U
CHARLESTON		WR4AFX	146.34	146.94	C T
COLUMBIA		WR4	147.96	147.36	P
COLUMBIA		WR4ACD	146.34	146.94	CAT
COLUMBIA		WR4ABA	146.28	146.88	C
FLORENCE		WR4AGM	146.37	146.97	C
GREENVILLE		WR4ADG	146.01	146.61	C
GREENVILLE		WR4ABG	146.34	146.94	C T
GREENVILLE		WR4AHJ	146.22	146.82	A
LANCASTER		WR4ABM	146.10	146.70	
MYRTLE BEACH		WR4			P
NORTH AUGUSTA		WR4ABB	146.13	146.73	C
PICKENS		WR4ADP	146.40	147.00	C
ROCK HILL		WR4AJO	146.43	147.03	C
SUMTER	*	WR4ACD	146.10	146.70	C

CHARLESTON	WR4AFX	449.10	444.10	C U

C CVRA MEMBER
A AUTOPATCH
T TONE ACCESS
* TEMPORARY CALL
* ALTERNATE FREQUENCY

U UNDER CONSTRUCTION
P PROPOSED
O OFF AIR TEMPORARILY

REPEATERS IN VIRGINIA

November 1, 1975

Virginia

ALBERTA		WR4	147.84	147.24	U
ALEXANDRIA		WR4	147.75	147.15	U
BARREN SPRINGS		WR4AFQ	146.07	146.67	
BULL RUN		WR4ADZ	146.37	146.97	T
CHARLOTTESVILLE		WR4ADV	146.28	146.88	
CHESAPKE/NORFLK		WR4ACN	146.19	146.79	CA
DANVILLE		WR4AHG	146.10	146.70	
FAIRFAX		WR4AAD	146.19	146.79	
GALAX		WR4AHR	147.69	147.09	C
HAMPTON		WR4ALH	146.13	146.73	U
HAMPTON		WR4AFT	146.34	146.94	C T
LEXINGTON		WR4ABU	146.01	146.61	C
LYNCHBURG		WR4ADY	146.34	146.94	C
LYNCHBURG		WR4AEN	146.16	146.76	
NEW MARKET		WR4	147.93	147.33	P
PORTSMOUTH		WR4	146.25	146.85	U
RICHMOND		WR4ADI	146.34	146.94	T
RICHMOND		WR4ACW	146.28	146.88	CAT
RICHMOND	*	WR4ACW	146.43	147.03	C P
ROANOKE		WR4AMQ	146.13	146.73	C
ROANOKE		WR4AFE	146.28	146.88	C
ROANOKE		WR4AFY	146.38	146.98	
ROANOKE		WR4AHT	146.34	146.94	C
STAUNTON		WR4ACL	146.37	146.97	C
SUFFOLK		WR4AKS	146.40	147.00	C
TYSON'S CORNER		WR4ABR	146.31	146.91	
VIRGINIA BEACH		WR4AAC	146.37	146.97	CA
WINCHESTER		WR4AGT	146.22	146.82	C
WOODBRIDGE		WR4AII	147.84	147.24	

LEXINGTON		WR4ABU	52.02	53.02	C P

TYSON'S CORNER		WR4AEY	223.34	223.94	
WOODBRIDGE		WR4AIJ	223.22	224.82	

ROANOKE		WR4AHT	447.75	443.75	U

146 MHZ BAND

GENERAL

146.00 - 146.46 Repeater Inputs
146.49 - 146.58 Simplex
146.61 - 147.06 Repeater Outputs
147.09 - 147.39 Repeater Outputs
147.42 - 147.66 Simplex
147.69 - 147.99 Repeater Inputs

All channel spacing is 30 kHz

REPEATER CHANNELS (27)

Input	Output	Input	Output
146.01	146.61	147.69	147.09
146.04	146.64	147.72	147.12
146.07	146.67	147.75	147.15
146.10	146.70	147.78	147.18
146.13	146.73	147.81	147.21
146.16	146.76	147.84	147.24
146.19	146.79	147.87	147.27
146.22	146.82	147.90	147.30
146.25	146.85	147.93	147.33
146.28	146.88	147.96	147.36
146.31	146.91	147.99	147.39
146.34	146.94		
146.37	146.97		
146.40	147.00		
146.43	147.03		
146.46	147.06		

SIMPLEX CHANNELS (13)

146.49 DX	147.42	147.57
146.52 NCF	147.45	147.60
146.55	147.48	147.63
146.58	147.51	147.66
	147.54	

SIMPLEX CHANNELS IN 145 MHZ REGION

Here are 28 channels available for simplex activity which just about all rigs will cover. Avoid operating between 145.85 - 145.975 as this portion is being used for satellite Communications.

145.02	145.23	145.44	145.65
145.05	145.26	145.47	145.68
145.08	145.29	145.50	145.71
145.11	145.32	145.53	145.74
145.14	145.35	145.56	145.77
145.17	145.38	145.59	145.80
145.20	145.41	145.62	145.83

CLUB MEETING CALENDAR

NORTH CAROLINA

ASHEVILLE	BUNCOMBE CO ARC 1ST THU 1930 COUNTY COURT HOUSE
ASHEVILLE	WNC VHF GROUP 2ND MON 1900 DINNER MTG @ GRACE REST MERRIMON ST
CARY	CARY ARC 4TH THU 1930 WHITE PLAINS METH CH, K4ITL RPT(28/88)
CHARLOTTE	MECKLENBURG ARS LAST TUE 1930 RED CROSS BLDG ON PARK RD, W4BFB/WR4AEU(34/94)
CHARLOTTE	CHARLOTTE RC THU 1900,CLUB IN BLDG @ WSOC-TV ON N TRYON ST, BUS MTG 1ST THU - W4CQ/WR4ALU(46/06)
CHARLOTTE	FRIDAY LUNCH GROUP FRI 1200 @ MR STEAK ON INDEPENDENCE BLVD
DURHAM	DURHAM FM ASSN 2ND TUE 1800 K&W CAFETERIA, UNIVERSITY MALL AT CHAPEL HILL, WR4AGC, 22/82
FAYETTEVILLE	CAPE FEAR ARS 3RD MON 1900 METHODIST COLLEGE WR4ADK(31/91)
GREENSBORO	GREENSBORO RC FRI 1930 CLUB HOUSE NEAR FRIENDSHIP AIRPORT BUS MTG 1ST FRI W4GG
GREENSBORO	H.A.M.L.E.T. 3RD FRI 1830 BONANZA STEAK HOUSE I40 @ JAMESTOWN RD
GREENSBORO	L.I.A.R.S. 2 + 4TH THU 1830 WESTERN SIZZLER, WEST MARKET ST.
HIGH POINT	TRIAD ARC 2ND TUE 1930 1200 CHESTNUT DR.
JACKSONVILLE	ONSLOW ARC 2ND SAT 1000 HOWARD JOHNSONS RESTAURANT
LEXINGTON	HEALING SPRINGS MTN VHF SOC LAST MON 1930 BURLINGTON HOUSE FURNITURE CO PERSONNEL OFFICE W4PAR/WR4ABX(31/91)
RALEIGH	RALEIGH ARS 1ST WED 1930 CD RM NC STATE ADMIN BLDG W4DW,WR4ACF(04/64)
SALISBURY	ROWAN ARS 2+4TH MON 2000 SALISBURY CITY HALL W4EXU,WR4AAA(13/73)
WINSTON-SALEM	FORSYTH ARS 2ND FRI 1930 NAVAL RESERVE TNG CTR

SOUTH CAROLINA

CHARLESTON	HOLIDAY VHF SOC 2ND WED 1930 PINEHAVEN SHOPPING CTR MTG RM
COLUMBIA	CAROLINA RPTR SOC 1ST MON 1930 PROVIDENCE PRES CH WR4ACD(34/94)
GREER	GREER ARC 1ST MON 1930 MTG LOC ANNOUNCED MONTHLY WR4ABG(34/94)
ORANGEBURG	ORANGEBURG ARC 1ST THU 1930 TENNELEC HWY 301 NORTH

VIRGINIA

LYNCHBURG	LYNCHBURG ARC 2ND TUE 2000 BEULAH BAPTIST CH K4HEX
NEWPORT NEWS	SPARC 1+3RD WED 1930 VEPCO BLDG HAMPTON WR4ALH(13/73)
NORFOLK	HAMPTON RDS RAD ASSN NEXT MTG TBA WA4MMP FOR DETAILS WR4ACN(19/79)
RICHMOND	RICHMOND AMATEUR TELECOMMUNICATIONS SOC(RATS) 1ST & 3RD FRI 1930 THE STONE HOUSE FORREST HILL PARK 1ST MTG BUS MTG WR4ACW(28/88)
VIRGINIA BEACH	VA BCH ARC 1ST TUE 1930 PLAZA FIRE STN WR4AAC(37/97)

November 1, 1975

CAROLINAS-VIRGINIA REPEATER ASSOCIATION, INC

Member Repeaters

SOUTHERN		DIRECTOR: K4FR VICE DIR: K4OKD	
BEAUFORT, SC	*	WR4AKO	31/91
CHARLESTON, SC		WR4AFX	34/94
COLUMBIA, SC		WR4ABA	28/88
COLUMBIA, SC		WR4ACD	34/94
FLORENCE, SC		WR4AGM	37/97
NORTH AUGUSTA, SC		WR4ABB	13/73
SUMTER, SC	*	WR4ACD	10/70

WESTERN	DIRECTOR: WB4ROI VICE DIR: WA4NUO	
ASHEVILLE, NC	WR4AKR	16/76
ASHEVILLE, NC	WR4AGF	22/82
ASHEVILLE, NC	WR4ALC	04/64
ANDERSON, SC	WR4AIO	37/97
GREENVILLE, SC	WR4ABG	34/94
GREENVILLE, SC	WR4ADG	01/61
LAKE TOXAWAY, NC	WR4AGH	81/21
PICKENS, SC	WR4ADP	40/00

COASTAL	DIRECTOR: WA4UQC VICE DIR: W4NTQ	
AURORA, NC	WR4ABQ	34/94
BEULAVILLE, NC	WR4ADS	34/94
GREENVILLE, NC	WR4AMB	69/09
GRIFTON, NC	WR4ABP	16/76
JACKSONVILLE, NC	WR4AJG	40/00
LAURINBURG, NC	WR4AIB	07/67
SEVEN SPRINGS, NC	WR4AEF	25/85
WILMINGTON, NC	WR4AHL	22/82

CENTRAL	DIRECTOR: K4WHQ VICE DIR: WB4NDB	
CHARLOTTE, NC	WR4AEU	34/94
CHARLOTTE, NC	WR4ALO	46/06
CHARLOTTE, NC	WR4ABT	22/82
CHARLOTTE, NC	WR4ABK	78/18
FOREST CITY, NC	WR4AHA	07/67
ROCK HILL, SC	WR4AJO	43/03
SHELBY, NC	WR4ABF	28/88

PIEDMONT	DIRECTOR: W4BUZ VICE DIR: W4IRE	
GREENSBORO, NC	WR4AOC	16/76
GREENSBORO, NC	WR4ANP	72/12
HIGH POINT, NC	WR4AFV	19/79
LENOIR, NC	WR4	93/33
LEXINGTON, NC	WR4ABX	31/91
MT AIRY, NC	WR4ACJ	37/97
REIDSVILLE, NC	WR4ADE	25/85
ROARING GAP, NC	WR4AGS	22/82
SALISBURY, NC	WR4AAA	13/73
WINSTON-SALEM, NC	WR4ACA	04/64

BAY	DIRECTOR: WA4MMF VICE DIR: WA4JZX	
CHESAPEAKE, VA	WR4ACN	19/79
ELIZABETH CITY, NC	WR4ADN	46/06
HAMPTON, VA	WR4AFT	34/94
MANTEO, NC	WR4AKB	34/94
MURFREESBORO, NC	WR4AFB	31/91
SUFFOLK, VA	WR4AKS	40/00
VIRGINIA BEACH, VA	WR4AAC	37/97

EASTERN	DIRECTOR: WA4WTX VICE DIR: K4ITL	
BURLINGTON, NC	WR4AIF	07/67
DURHAM, NC	WR4AGC	22/82
DURHAM, NC	WR4AJV	75/15
DURHAM, NC	WR4AGC	220 MHZ
FAYETTEVILLE, NC	WR4ANN	31/91
RALEIGH, NC	WR4ACF	04/64
RALEIGH, NC	WR4AOE	28/88
SMITHFIELD, NC	WR4ALY	43/03

MOUNTAIN	DIRECTOR: WB4MOV VICE DIR: W4PDL	
GALAX, VA	WR4AHR	69/09
LYNCHBURG, VA	WR4ADY	34/94
ROANOKE, VA	WR4AFE	28/88
ROANOKE, VA	WR4AMQ	13/73
ROANOKE, VA	WR4AHT	34/94

NORTHERN	DIRECTOR: K4ARO VICE DIR: K4PQD	
LEXINGTON, VA	WR4ABU	01/61
RICHMOND, VA	WR4ACW	28/88
RICHMOND, VA	WR4	450 MHZ
STAUNTON, VA	WR4ACL	37/97
WINCHESTER, VA	WR4AGT	22/82

TEKNICLE TOPIX

We have two articles for you FM buffs this issue. The first one was featured in "RF" 79, the newsletter of WR4ACN in Norfolk and was written by Tom Lossen, WA4ILH. The second article was taken from the 1974 RADIO AMATEUR'S HANDBOOK and is presented for you hidden transmitter fanatics or fox hunters if you prefer.

GAIN IN OMNIDIRECTIONAL ANTENNAS--WA4ILH

One of the most confusing considerations in attempting to evaluate an antenna is determining the antenna's "gain." If an antenna is said to have a 3 db gain, this information is, in itself, incomplete. In order to determine how good an antenna is, we must have something to compare it with.

MOBILE ANTENNAS; In mobile antennas, most antennas are compared to a 1/4 wave vertical. For 2 meters this is a 19 inch whip. If you wish to improve on the 1/4 wave whip, you may try a 5/8 wave vertical. The 5/8 vertical exhibits a 3 db gain over a 1/4 wave vertical. This is equivalent to doubling the output power of your transmitter. In addition to doubling your effective radiated power, you also benefit by doubling the amount of signal delivered by the antenna to the receiver. You therefore make the receiver "more sensitive" to weak signals.

How can an antenna double our ERP? The answer is in the way the antenna "distributes" the energy that it is radiating. Basically, a 1/4 wave vertical will radiate power equally well in all directions, both in bearing and in elevation. The radiation pattern of a 1/4 wave antenna near the ground, as in most mobile FM work, will look like a hemi-sphere as in Fig. 1A and 1B.

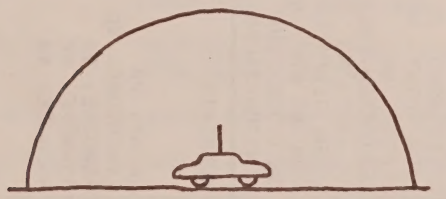
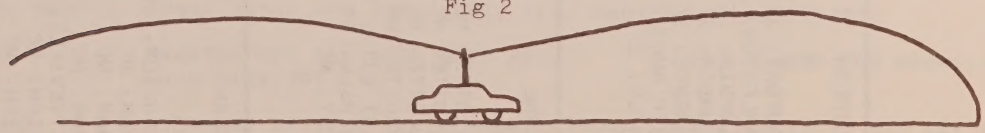


Fig 1A
Side View

Fig 1B
Top View

The radiation pattern of a 5/8 wave vertical will radiate power equally in the horizontal plane (bearing); however, the angle of radiation is reduced, keeping more of the energy near the ground where it is needed for land mobile communications. Unless you are interested in working aircraft overhead or you live in an extremely mountainous area, it would appear that the pattern in Fig. 2 would exhibit a higher gain than the 1/4 wave pattern in Fig. 1.

Fig 2



There are other improvements which can be made over the 1/4 wave whip. The collinear antenna consists of several vertical sections phased or "stacked" over each other so as to interreact with the other sections of the antenna to achieve an extremely low angle of radiation and resultant relative gain. This author uses a Hustler collinear antenna which is a 5/8 phased 1/4 wave over a 1/4 vertical. The gain of this antenna is almost 6 db over a 1/4 wave whip. Six db will increase your effective radiated power by a multiple of 4. The extremely low angle of radiation of a collinear antenna makes it ideal for fringe work or cross country traveling. These antenna tend to get rather long (typically 90 inches) and will scrape low objects near the road such as trees or drive-ins.

In addition to the theoretical gains of longer antennas, the fact that you are getting the top of your antenna higher in the air at VHF tends to reduce the problems of mobile flutter and dead spots. This is particularly helpful in low lying areas or driving in city traffic.

BASE STATION ANTENNAS: The principles for mobile antennas are also applicable for fixed stations. The fixed station antenna does not have the size or structural limitations of a mobile installation. The reference antenna, or the antenna which we compare another fixed antenna with is the dipole. Db gain over a dipole is written as dbd.

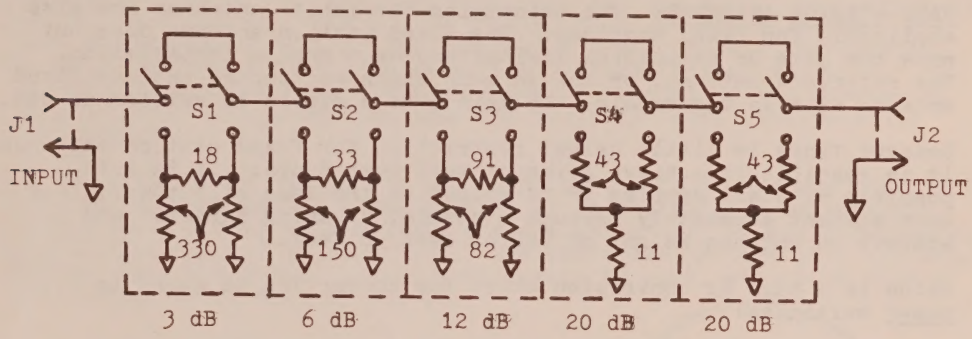
Because there is little height restriction for fixed station antennas, it is possible to achieve gains of well over 6 dbd. It is also possible to stack dipoles or "J poles" on the legs of a tower, feed each element separately through a coaxial "phasing harness" and achieve an antenna height at VHF of over 50 feet.

Below is a list or conversion chart for converting db gains to power multiples:

db Gain	Multiply By
3	2
6	4
9	8
10	10
12	16
15	32
18	64
20	100
30	1000
40	10,000

RECEIVER FRONT-END ATTENUATORS--ARRL(Source)

One only has to enter one hidden transmitter hunt as a greenhorn to find that he definitely needs some method of reducing the strength of the hidden transmitter as he gets closer to it. A simple solution to this problem is a variable attenuator that is installed between the direction-finding antenna and the input of the receiver. The 1974 RADIO AMATEUR'S HANDBOOK offers a solution to this problem. On pages 263 & 264 are descriptions of two dandy attenuators that fill the bill nicely, one of which will be described shortly. This attenuator has a 50-ohm impedance and if 1/4 watt carbon resistors are used (remember to use the shortest leads possible), should work nicely up to at least 150 MHz. For maximum effectiveness, the attenuator stages should be shielded from one another, and the unit should be constructed in a shielded enclosure. The various stages can be used singly or together to build the attenuation needed. Here is the schematic:



PARTS NOTES:

J1,J2-- Suitable IN/OUT connectors
S1-S5-- Miniature DPDT toggle switch
All resistors are 1/4 watt, 5% carbon (short leads)

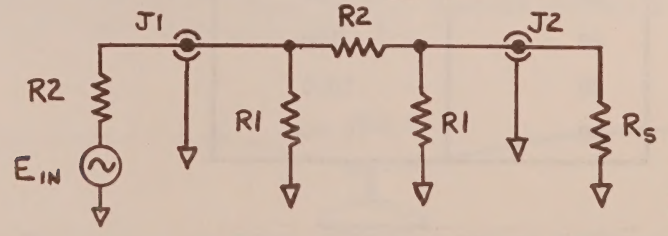
FOR THOSE WHO WANT TO KNOW:

How to design a pi-type attenuator section was featured in the January, 1967 issue of 73 Magazine. The following equations were given for the circuit below:

$$R_1 = R_s\ (\sqrt{K}\ + 1)/(\sqrt{K}\ - 1)$$

$$R_2 = R_s\ (\ K - 1)/(\ 2\sqrt{K}\ )$$

where R_s is the characteristic impedance of the pad(usually 50 ohms) and K is the attenuation factor, P_{in}/P_{out}.



73 de
WB4EXW

WHAT SHOULD BE PUBLISHED IN THE JOURNAL??

Bill Parris, K4GHR

The Editor has tried to maintain a reasonable variety of articles in "The Repeater Journal" since assuming the job back in March 1973..... for those of you who do not remember that far back, that was when the President resigned because he had some inner thoughts about continuing to serve, the Vice President didn't want to get involved in anything, and I, K4GHR, happened to be the Secretary who didn't want to see the CVRA (Then known as the North Carolina FM Repeater Association) fold up.

The "Journal" has been primarily a "News" bulletin, with a few simple Technical articles thrown in. A few controversial articles have appeared, but really, not very many of those either.

Any of you who have been an Editor of an amateur newsletter know how difficult it is to get something to print.... and staying up on the news in a three state area takes all the time I can give it. After returning home from the Shelby meeting, I reviewd every article that has appeared in the "Journal" since its first issue, and I only could see two that have brought some sort of negative response from the membership. It is strange that it should have been like this..... Member A wrote an article for the "Journal", member B wrote a letter complaining about its content. Member B later wrote an article for the "Journal", and Member A complained about it. In other words, the only complaining that has come to the Editor has come from two members complaining about each others' articles.

Now I am sure that there have been some comments from members that did not get back to the Editor, but after all, I could think up some reason to offer an opposing view to any article.

So after giving it a little thought... and I do mean little.... I will continue to publish the "Journal" just as it has been in the past. When the next President comes into office, he has the opportunity to name his own Editor. Meanwhile, as I stated at the Shelby meeting.... " I retain the right to edit and select articles for the "Journal" as I so desire. I will not allow the "Journal" to develope into a newsletter full of letters to the Editor complaining about the technicalities of some previous article or about the technical competance of another member. I hope the membership will accept this approach."

Every item received by the Editor which is not printed by the Editor will be forwarded to the Board. If the Board directs that it be printed, it will be.

NEW WA4-WB4-WN4 QSL BUREAU MANAGER..... Effective January 1, 1976, the Sterling Park Amateur Radio Club, PO Box 599, Sterling Park, VA 22170, will serve as the QSL Bureau for the WA/WB and WN4 amateurs. Manager will be Terry Norman, WA4HPF, who will begin a three year term. Get your envelopes to him now. (ARRL)

TAKE YOUR WALKIE TALKIE TO BERMUDA.....WB4LWX reports that VP9BA operates on 34/94 from its Lighthouse location near Hamilton. The repeater should be up and running using its new VHF Engineering machine by now. About 20 amateurs support the local club, the Radio Society of Bermuda. Visiting amateurs will find great hospitality from VP9BY and VP9GE. Accessing the repeater from aboard ships outside the limits seems to be OK, but you will need a license from the Government Radio Inspector for operation on the island. There is no fee for a 30 day permit. Bill reports that he worked two mobiles near Hamilton on 94 simplex from his cruise ship 30 miles off shore with a Standard 146A Walkie-Talkie.

REPORT FROM THE EASTERN DISTRICT

Director: WA4WTX, Charles Durst 4407 Sunny Court Durham, NC 27705
Vice Dir: K4ITL, Danny Hampton 550 Granite St. Raleigh, NC 27608

(FAYETTEVILLE, NC) .... W4EHF, Bill Finch, has recently been named ARRL Section Emergency Coordinator (SEC) for the state of North Carolina, replacing Herb Lacy, K4FBG. Herb deserves a big vote of appreciation by the amateurs of North Carolina for his outstanding service as SEC. Herb was instrumental in re-vitalizing the EC activity in the state during his term, and establishing an EC Net on 75 meters. W4EHF brings a strong background of VHF/Repeater operations into the SEC job. Bill was the owner/operator of the original Fayetteville repeater which was just recently taken over by the local amateur club - The Cape Fear ARS. Bill has been serving as EC for Cumberland County for several years. Let's all give Bill our support in his new assignment. Anyone interested in finding out more about the Amateur Radio Public Service Corps and the role of the County EC should contact Bill at 818 Emeline, Fayetteville, NC 28303. (W4WXZ, K4GHR)

(FAYETTEVILLE, NC) .... WR4ANN, 31/91, sponsored by the Cape Fear ARS is now fully operational from its new home at the Methodist College. The club invites us all to use "Miss Ann", as she is affectionately known, when we are in the Fayetteville area. (Cape Fear ARS News)

(BURLINGTON, NC) .... The North Carolina Amateur Radio Council, which was spearheaded by individuals within the Alamance ARC, has had to fold up due to lack of anyone to pick up the ball as leader. Mark McIntyre, WA4FFW, Interim President of the Council, had to resign due to personal and business reasons. Although appeals were made for someone to step forward, apparently no one would volunteer to serve..... so another good idea bites the dust..... for the time being anyway.

(DURHAM, NC) .... WR4AGC, 222.34/223.94, is now running 40 watts output, with an ERP of 90 watts. Consistent mobile coverage has been obtained with a range of 35-45 miles, which includes an area stretching from beyond Raleigh to parts of Greensboro. On several occassions, 10 watt mobiles have worked through it from Siler City, High Point, Oxford, Danville and even Lynchburg-- approximately 100 miles away. The new amplifier, as well as the rest of the repeater, is 100% solid state, and has emergency power capability. There are 15 users at the present time. (WB4DBB)

(DURHAM, NC) .... Most of the hardware for a six meter repeater has been obtained and construction should begin in the very near future says Herman, WB4DBB. No definite frequencies have been picked out. (WB4DBB)

(RALEIGH, NC) ..... At long last, K4ITL Repeater finally got a WR call..... it is WR4AOE. That cleans out all the old repeater calls so well remembered around the state of North Carolina. (WA4WTX)

FCC HIGHLIGHTS.... John Johnston, K3BNS, has been named the Chief of the Amateur and Citizens Division succeeding Prose Walker, W4BW. Joe Johnson, W3GGO, has been named Chief of the Rules and Legal Branch of the Amateur and Citizens Division. All of these changes were made in August/September.

T-MARC HAS CHANGED ITS NAME..... The Mid-Atlantic Repeater Council, T-MARC, has changed its name to The Mid Atlantic FM and Repeater Council to reflect its interest in simplex activities as well as repeaters. Membership is open to all clubs or individuals who are interested in any type of channelized VHF/UHF operations. (Auto-Call)

REPORT FROM THE BAY DISTRICT

Director: WA4MMP, Bill Shaw 2216 Dunbarton Drive Chesapeake, Va. 23325
Vice Dir: WA4JZX, Joe Stevens 704 W. Main St. Elizabeth City, NC 27909

(PORTSMOUTH, VA) ..... Tom Lussen, WA4ILH, is continuing his work on the 25/85 machine. Progress has been hampered by the lack of time after work for Tom to tinker since he's working on his business degree at night school. Additionally, he hopes to go to a duplexer system to permit simultaneous TX and RX from a Station Master at 400 ft on the old WYAH, Channel 27, tower. With a little luck, Tom will have the machine fired up by January 1976.... just in time to start off the Bi-Centenial celebration. (WA4MMP)

(HAMPTON, VA) ..... Yes, there will be a repeater here on 13/73 some day..... just be patient. The boys from SPARK, Southern Peninsula Amateur Radio Club, have had a minor set back in the duplexer area and are working feverishly to get the maze of copper pipes working. The machine is still at WB8IIM/4's garage and has passed "burn-in" satisfactorily. Once the duplexer catches up, WR4ALH will take its post high atop the Chamberlin Hotel to serve both sides of Hampton Roads. (WA4MMP)

(CHESAPEAKE/NORFOLK, VA) ..... WR4ACN, 19/79, is still awaiting its emergency power capability. All parts are in the hands of the Technical Committee headed by Vern Fix, W4THN. With some luck and help from the Technical committee members, this feature should be complete by early December. (WA4MMP)

(VIRGINIA BEACH, VA) .... A new non profit corporation called "Tidewater Radio Convention, Inc" will sponsor the 1976 vacation oriented Virginia Beach Hamfest next July 24 and 25 at the Virginia Beach Dome Convention Center on the ocean front. TRCI is run by a Board of Directors consisting of representatives from each of the major Amateur Clubs in the Tidewater Area. Current plans call for DX, VHF, SPACE, FM, and CONTEST Forums. An ample parking lot will be available for a flea market. Additionally, TRCI is attempting to recruit the ARRL Roanoke Division Convention to join the show for 1976.

(NORFOLK, VA) .... The Tidewater Amateur Radio Club, TARC, is planning a six meter repeater which will be a first in the Bay District. Currently all six meter activity in this area is on 52.525 simplex. This repeater is evolving slowly and the club will be coming to the CVRA for frequency coordination when ready. The planned site is the 400 ft tower downtown at Fort Norfolk. The machine will most likely use separate antennas on the tower and run about 30 watts output on 52.525, until local activity increases, and then move to a standard band plan pair. Anyone wishing to obtain further details on this proposed repeater may contact TARC President, Bill Conner at (804) 460-1215. (WA4MMP)

REPORT FROM THE WESTERN DISTRICT

Director: WB4ROI, Henry Roberts 131 Wilshire Dr. Greenville, SC 29609
Vice Dir: WA4NUO, Ralph Roberts Rt 1 Box 284 Alexander, NC 28701

(ANDERSON, SC) ..... WR4AIO, 37/97, is now transmitting and receiving on a Phelps-Dodge antenna side mounted on the WAIM-TV tower at the 380' level. Previously the transmitter was feeding a re-tuned commercial antenna located inside the tower at the 245' level. The machine consists of Motorola Sensicon units feeding through a North Shore 6 cavity duplexer. Good coverage is reported along I-85, so be sure to try 37/97 when you are in the area. (W4FVV)

REPORT FROM THE NORTHERN DISTRICT

Director: K4ARO, Carter Cogle 1667 Varina Ave. Petersburg, Va. 23803
Vice Dir: K4PQD, Tom Gimbert Rt 1, Box 18 Rixeyville, Va. 22737

(RICHMOND, VA) .....Anyone passing through the Richmond area on October 9, 1975, probably found a lot of simplex acticity on 52.525, 146.52, .70,.88, & .94 and 449 mHz under the call of WA4ZBE. This is the RATS club call and the operation was in support of a fund raising Raft Race for MS, sponsored by radio station WRVQ. Bright blue jacketed RATS members carrying HT's were quite conspicuous in the crowd estimated to be about 10,000 who came to cheer on their favorite of the more than 200 rafters who entered the race. RATS provided communications between the start and finish lines, including teletype copy of timing, traffic control in the parking lots, and for public agencies including the Virginia Game and Fisheries Commission and the U. S. Coast Guard. Club members had a great time and once again demonstrated the value of Amateur Radio. Many raft racers were pushed in the wrong direction when the James River tide reversed, but participants and spectators alike had an enjoyable day in perfect weather and plenty of schnapps. A bigger and better activity is being planned for next year. (K4ARO)

(ALBERTA, VA) .... K4ARO is patiently awaiting the license to arrive for the forthcoming Alberta Repeater which will be on 147.84/147.24. Alberta is located on I-85 about half way between Petersburg and the North Carolina/ Virginia state line. This machine will fill a big gap in repeater coverage along I-85. (K4ARO)

(PETERSBURG, VA) ..... K4ARO asks that repeater reps and Associate Members please send him news from the Northern district that lies outside the greater Richmond area.

REPORT FROM THE CENTRAL DISTRICT

Director: K4WHQ, Bill Bridges 904 East Main Street Shelby, NC 28150
Vice Dir: WB4NDB, Ken Dresser Rt 11 Box 179T Charlotte, NC 28213

(CHARLOTTE, NC) .... The Mecklenburg ARS and The Charlotte Radio Club combined efforts on Saturday, September 27, and co-sponsored the First Annual Amateur Radio Day in Charlotte. Four demonstration stations were set up in four of the larger shopping centers during the day to aquaint the public with Amateur Radio. Contacts were made on both HF and VHF bands. Literature provided by ARRL was distributed and members for future Novice Classes were enrolled. Mayor Belk issued a proclamation from City Hall declaring Amateur Radio Day in Charlotte. Several local TV stations shot film during the operation and presented it on the late news. (K4GHR)

(CHARLOTTE, NC) .... The Mecklenburg ARS operating W4BFB from atop Roan Mountain in Western NC during the September VHF Contest ran up an impressive 20,700 points which may be a record score from the Southeastern states for the Fall contest. (K4GHR)

(ROCK HILL, SC) .... The Rock Hill ARC conducted a very successful Hamfest on Sunday October 5. If you missed it, you certainly missed a good weekend. This club also sponsors WR4AJO, 43/03, which will probably be moved to a yet undisclosed site in the very near future..... better mobile coverage is expected.

ACTIVITY BELOW 146 mHz

The following comments were received from Lew Collins, W1GXT, Arlington, Mass. concerning the article in the last "Journal" discussing activity below 146 mHz:

> With regard to operation below 146 mHz, it might be more appropriate to call 145.025 mHz the "Mid Atlantic States Calling Frequency". About two years ago, the North East VHF Association, which is comprised of VHF/UHF experimenters from Maine to Eastern Pennsylvania, designated 144.110 mHz as its calling frequency, with a secondary CW calling frequency of 144.100 mHz. At its most recent Annual Meeting on August 24, 1975, the membership confirmed this choice, and expressed hope that soon the FCC would act on the proposal contained in Docket 20282 which will permit Technicians to operate between 144 and 145 mHz. In addition, at this meeting the membership voted to designate Monday night as "144 mHz Activity Night". All stations with 144 mHz capability, any mode, are encouraged to get on the air on Mondays and "make some noise" on the band. If 144.110 is not busy, call there. If it is busy, move up the band and call "CQ". This activity night parallels the long standing practice in New England of a 220 mHz activity night on Tuesday, and 432 mHz on Wednesday.

Lew goes on to point out that the Northeast VHF Association publishes a newsletter six times a year with news of interest to VHF/UHF experimenters. Dues are $3.00/year, payable in September. Persons desiring to join the NEVHF Assoc. should write: Lew Collins, W1GXT, Treasurer, NE VHF Assoc., 11 Brattle St., Apt 19, Arlington, Mass. 02174.

Monthly we receive a free copy of a newsletter that, without a doubt, contains more VHF news in one place than any other bulletin that I have ever run across..... this is the "Tidewater SSBN Report", published by Bill Shaw, WA4MMP, 2216 Dunbarton Dr., Chesapeake, Va. 23325. As you have probably noticed, we steal a number of the Technical Articles published in the "Journal" from this bulletin. Bill says, "The Tidewater SSBN Newsletter is published monthly in a dimly lit garage late at night and is sent to all those interested. A small yearly contribution of about $2.50 is requested to off set postage and preparation cost."

Bill comments further, "....on two meters, because of the licensing split, some Hams will be found on 144 while the others will be on 145. Most activity in the North Carolina area is on 145 while 144 is the hang out for the North Easterners. Where do the two meet? Well, right now, not too often anywhere. So here is a contest proposal: Operate 145.025 on the half hour intervals, and on 144.110 on the hour. Remember, it takes two to tango and there are no points for one way QSO's."

And today, I received a note from Watson Gabriel, WB4EXW, stating that: "Interest in 2 meter SSB is picking up. Ops hanging out around 145.025 mHz include WA4BCX, WA4ZIA, K4HJE, K4CAW, WB4SSA, WA4GBE, WA4MMP, WB4DBB, K4LVV and WB4EXW."

See you on 2 meter SSB?

ROYSTON, GA REPEATER FOLDS.... W4VRO shut down his repeater which was on 19/79 in Royston due to lack of local support. He hopes that another group in North Georgia will put a repeater back on this frequency. (W4FVV)

FREQUENCY DEFINITION FOR THE BEGINNER

The newcommer to two meter FM is sometimes confused by the way he hears the various repeater and simplex frequencies identified. Let's try to clear up some of this.....

First of all, you must appreciate that the two meter band has been divided up into channels..... by gentlemen's agreement. The most widely accepted "Band Plan" is the one recommended by ARRL, and that is the same one in use throughout the CVRA area. You will find a copy of that Band Plan in this issue. Notice that there is a section marked "Repeater Channels" and another marked "Simplex Channels". Naturally the "simplex channels" contain only one frequency, but the "repeater channels" contain two --- one to denote the input frequency of the repeater (your transmitting frequency), and the other to denote the output frequency of the repeater (your receiving frequency).

When you hear someone say, "Let's move to five two"..... they are referring to 146.52 mHz which is a simplex frequency, in fact the most popular one. Likewise if you want someone to meet you on 146.58 mHz, you may tell him to move to "five eight". This terminology holds true for all simplex frequencies in the 146 mHz area, but it does not seem to hold up when you want to move to a 147 mHz simplex frequency, or to a frequency below 146 mHz. Then you will say, "let's move to one forty seven four five", or some other frequency.

For repeater channels, you will hear someone say, "I have crystals for three four nine four, and two two eight two in this rig". He has just said that he has two repeater channels in his rig.... the first being 146.34 Input 146.94 output, and the second being 146.22 Input and 146.82 output. The repeater input frequency is always given first, followed by the repeater output frequency. In writing these frequencies, as we do in the "Journal", you would see these same two repeater frequencies appearing as 34/94 and 22/82.

Likewise, if you live in Greensboro, and use WR4ANP, it has an input frequency of 147.72 mHz, and an output frequency of 147.12 mHz. This is a standard channel and is referred to as seven two one two..... which would be written as 72/12. Another example, if you are a user of the Mt. Airy, NC repeater, WR4ACJ, you know that the repeater input frequency (this is where the repeater's receiver is listening and you are transmitting)is 146.37 mHz. The repeater output frequency (this is where the repeater's transmitter is transmitting and you are listening) is 146.97 mHz. You will refer to this channel as three seven nine seven, and write it as 37/97.

Look over the Band Plans listed in this issue and become familiar with the repeater frequencies in use in your area.

---

cartoon tnx to "Mike Shy", Chicago.

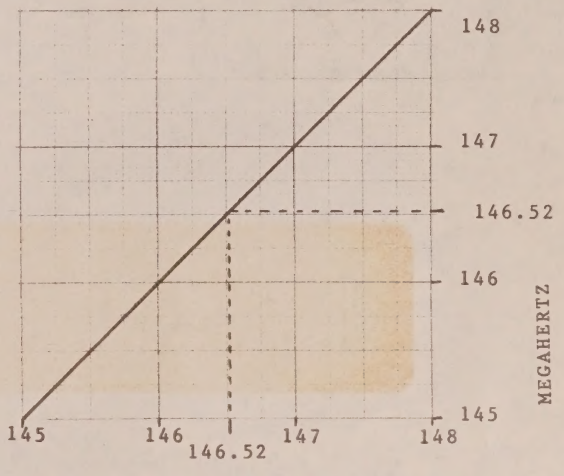
MORE TECHNICAL HELP AVAILABLE HERE.....

With the large influx of some real "old timers" onto the two meter repeaters, and other VHF frequencies, one doesn't have to listen very long until you can observe a great deal of miss-understanding existing between the more recent vintage VHF'er and the old 80 meter CW man. For instance, when one party speaks of frequencies, he may express them as Megacycles, while the other party is more familiar with the new fangled Metric System and speaks of frequencies in Hertz..... not to be confused with the Rent a Car company that's out at the local airport. So we are providing here a small graph which you may want to cut out and carry around with you so you will be quick to understand where the other guy is speaking of.

Special VHF Frequency Conversion Graph

Megacycles to Megahertz

Example: read up from 146.52 mcs to line, then right to 146.52 mHz..... very quick, eh?



AMATEUR LICENSE APPLICATIONS are now moving through Gettysburg in "normal" 6-7 week turn around time. Note that FCC's computer is programmed to issue renewals on the day it gets them, so submitting your application for renewal too early may well short you by a month or two. Don't forget, though, if your license is involved with any repeater or remote base station, be sure to note that fact and the station's call on your application so your previous license(s) paperwork can be located.

Repeater Applications have not caught up quite as well as personal licenses, but continuing special efforts by Washington FCC staff are whittling down the backlog rapidly. Repeater applications continue at a 10-15 per week rate.

CB Service has just been issued its 2,000,000th license! With most licenses covering more than one transmitter and current estimates that half the active CBers are unlicensed, that's plenty!

REPEATER FUNDING may become an issue with the FCC if some flagrant abuses aren't corrected. Though use of a club's dues to pay for repeater maintenance is well within the Amateur rules, the solicitation of money for the use of a given repeater or its facilities (such as autopatch) is almost certainly a violation of Part 97.112 -- "No remuneration for use of station."

ADDRESS CORRECTION REQUESTED

CAROLINAS - VIRGINIA REPEATER ASSN.
Post Office Box 3325
Burlington, North Carolina 27215

BULK RATE
U. S. POSTAGE
PAID
BURLINGTON, N. C. 27215
PERMIT NO. 271

BILL FINCH W4EHF
818 EMELINE AVE F
FAYETTEVILLE, NC 28303

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APPLICATION FOR ASSOCIATE MEMBERSHIP
CAROLINAS-VIRGINIA REPEATER ASSOCIATION

NAME: _____ CALL: _____ DATE: _____

ADDRESS: _____ PHONE: _____

CITY: _____ STATE: _____ ZIP: _____

MEMBER OF ARRL? _____ MY HOME REPEATER IS: _____

Enclosed is: _____ $ 2.00/one year Carolinas-Virginia Repeater Assn.
Mail to:
Lindsay Cleveland, W4IZI
P. O. Box 3325
Burlington, NC 27215

_____ $ 4.00/two years

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